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TECHNOLOGY CENTER 2800

In re Application of: Shimon Weiss et al. )

Filed: Herewith )

Serial Number: Continuation Application of Serial )  
No. 09/259,982 )

Title: "Semiconductor Nanocrystal Probes for )  
Biological Applications and Process for Making )  
and Using Such Probes" )

Group Art Unit: Unknown

Examiner: Unknown

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INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.56

Honorable Commissioner of Patents  
and Trademarks  
Washington, D.C. 20231

February 12, 2001

Sir:

Pursuant to 37 CFR 1.56, 1.97, and 1.98, Applicants submit the attached Form PTO-1449 (modified). This application is a Divisional application of Serial No. 09/259,982; filed March 1, 1999. Since all of the cited documents listed on the enclosed form PTO-1449 (modified) were previously submitted to the USPTO in parent application Serial No. 09/259,982, under the provisions of 37 C.F.R. 1.98(d) copies of the listed documents are not enclosed.

Respectfully submitted,

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FORM PTO-1449 (Modified)  
U.S. Department of Commerce, Patent and Trademark Office

Docket No.

Serial No.

IB-1330C

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

Applicant

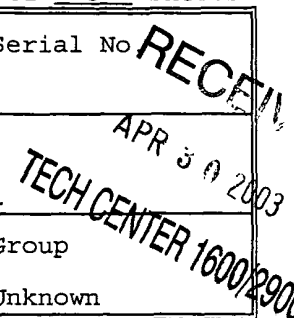
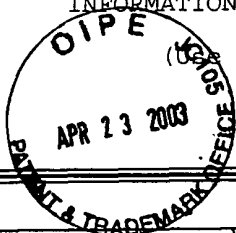
Shimon Weiss et al.

Filing Date

Herewith

Group

Unknown



## U.S. Patent Documents

*Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA	3,996,345	12/7/76	Ullman et al.	424	12	6/30/75
	AB	4,637,988	1/20/87	Hinshaw et al.	436	546	2/3/86
	AC	4,777,128	10/11/88	Lippa	435	5	5/27/86
	AD	5,262,357	11/16/93	Alivisatos et al.	437	233	11/22/91
	AE	5,319,209	6/7/94	Miyakawa et al.	250	459.1	11/19/92
	AF	5,505,928	4/9/96	Alivisatos et al.	423	299	4/21/94
	AG	5,537,000	7/16/96	Alivisatos et al.	313	506	4/29/94
	AH	5,585,640	12/17/96	Huston et al.	250	483.1	1/11/95
	AI	5,674,698	10/7/97	Zarling et al.	435	7.92	3/30/95
	AJ	5,736,330	4/7/98	Fulton	435	6	10/11/95
	AK	5,751,018	5/12/98	Alivisatos et al.	257	64	4/29/94
	AL	5,990,479	11/23/99	Weiss et al.	250	307	11/25/97

## Foreign Patent Documents

							Translation	
		Document Number	Date	Country	Class	Subclass	Yes	No
	AM	WO 99/19515	4/22/99	Chandler et al.	C12Q	1/68		N/A
	AN	EP 0 990 903	5-APR-00	Europe - EPO	G 01 N	33/58		N/A
	AO	WO 98/04740	5-FEB-98	International-WIPO	C 12 Q	1/68		N/A
	AP							

## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	AR	Alivisatos, A. P., "Semiconductor Clusters, Nanocrystals, and Quantum Dots," <u>Science</u> 271 (February 16, 1996):933-937.
	AS	Alivisatos, A. P., "Perspectives on the Physical Chemistry of Semiconductor Nanocrystals," <u>J. Phys. Chem.</u> 100 (1996):13226-13239.
	AT	Alivisatos, A. Paul, et al., "Organization of 'Nanocrystal Molecules' Using DNA," <u>Nature</u> 382 (August 15, 1996):609-611.

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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with your communication to applicant.

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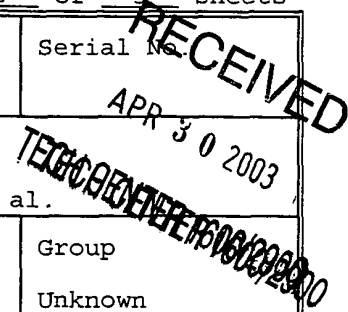
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(Use several sheets if necessary)



## OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

BA	Beverloo, H.B., et al., "Preparation and Microscopic Visualization of Multicolor Luminescent Immunophosphors," Chapter 4 of Beverloo, H.B., "Inorganic Crystals as Luminescent Labels: Their Applications in Immunocytochemistry and Time-Resolved Microscopy," Ph.D. dissertation, University of Leiden (The Netherlands), May 13, 1992, pp. 553-573.
BB	Bruchez, Marcel P., Jr., "Luminescent Semiconductor Nanocrystals: Intermittent Behavior and Use as Fluorescent Biological Probes," Ph.D. dissertation, University of California, December 17, 1998.
BC	Bruchez, Marcel, Jr., et al., "Semiconductor Nanocrystals as Fluorescent Biological Labels", <u>Science</u> , Vol. 281, September 25, 1998, pp. 2013-2016.
BD	Bruchez, Marcel, Jr., et al., "Semiconductor Nanocrystals as Fluorescent Probes for Biology", <u>Cytometry Supp.</u> 9 (1998):26.
BE	Chan, Warren C.W., et al., "Quantum Dot Bioconjugates for Ultrasensitive Nonisotopic Detection," <u>Science</u> 281 (September 25, 1998):2016-2018.
BF	Coffer, Jeffrey L., et al., "Characterization of Quantum-Confined CdS Nanocrystallites Stabilized by Deoxyribonucleic Acid (DNA)," <u>Nanotechnol.</u> 3 (1992):69-76.
BG	Cook, Neil D., "Scintillation Proximity Assay: A Versatile High-Throughput Screening Technology," <u>Drug Discovery Today</u> 1 (July, 1996):287-294.
BH	Correa-Duarte, Miguel A., et al., "Stabilization of CdS Semiconductor Nanoparticles Against Photodegradation by a Silica Coating Procedure," <u>Chem. Phys. Lett.</u> 286 (April 17, 1998):497-501.
BI	Dabbousi, B.O., et al., "(CdSe)ZnS Core-Shell Quantum Dots: Synthesis and Characterization of a Size Series of Highly Luminescent Nanocrystallites", <u>Journal of Physical Chemistry B</u> , Vol. 101, 1997, pp. 9463-9475.
BJ	Jacoby, Mitch, "Quantum Dots Meet Biomolecules," <u>C&amp;E News</u> 76 (September 28, 1998):Copied from the Internet as pp. 1-3.
BK	Kagan, C.R., et al, "Electronic Energy Transfer in CdSe Quantum Dot Solids," <u>Phys. Rev. Lett.</u> 76 (February 26, 1996):1517-1520.
BL	Lacoste, T.D., et al., "Super Resolution Molecular Ruler Using Single Quantum Dots", <u>Biophysical Journal</u> , Vol. 78, January, 2000, page 402A, XP-000933548 Abstract.
BM	Leff, David N., "Color-Coding Quantum Dots Debut with Promising Careers in Clinical Diagnostics Field," <u>Bioworld Today</u> , September 25, 1998, Copied from the Internet as pp. 1-2.

Examiner

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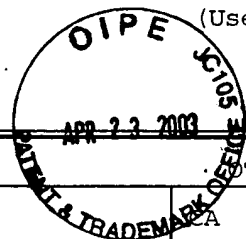
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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Liz-Marzán, Luis M., et al., "Synthesis of Nanosized Gold-Silica Core-Shell Particles," Langmuir 12 (1996):4329-4335.

CB

Mahtab, Rahina, et al., "Preferential Adsorption of a 'Kinked' DNA to a Neutral Curved Surface: Comparisons to and Implications for Nonspecific DNA-Protein Interactions," J. Am. Chem. Soc. 118 (1996):7028-7032.

CC

Mahtab, Rahina, et al., "Protein-Sized Quantum Dot Luminescence Can Distinguish Between 'Straight,' 'Bent,' and 'Kinked' Oligonucleotides," J. Am. Chem. Soc. 117 (1995):9099-9100.

CD

Murphy, Catherine J., et al., "Quantum Dots as Inorganic DNA-Binding Proteins," Mat. Res. Soc. Symp. Proc. 452 (1997):597-600.

CE

Peng, Xiaogang, et al., "Epitaxial Growth of Highly Luminescent CdSe/CdS Core/Shell Nanocrystals with Photostability and Electronic Accessibility," Journal of the American Chemical Society, Vol. 119, No. 30, pp. 7019-7029.

CF

Peng, Xiaogang, et al., "Synthesis and Isolation of a Homodimer of Cadmium Selenide Nanocrystals," Angewandte Chemie-International Edition in English, 36 (1997):145-147.

CG

Service, Robert F., "Semiconductor Beacons Light Up Cell Structures," Science 281 (September 25, 1998):1930-1931.

CH

Shröck, E., et al., "Multicolor Spectral Karyotyping of Human Chromosomes," Science 273 (July 26, 1996):494-497.

CI

Zhang, Yu-zhong, et al., "Novel Flow Cytometry Compensation Standards: Internally Stained Fluorescent Microspheres with Matched Emission Spectra and Long-Term Stability," Cytometry 33 (1998):244-248.

CJ

CK

CL

CM

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